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Project: Twin Lakes

Project Sponsor: Cane Slash Road, LLC

Agency and Permit Number: SC SHPO Project Number 16-ED0137

Project Location: Johns Island, Charleston County, South Carolina (Figure 1)

Field Personnel: Michael Trinkley and Debi Hacker

Date of Survey: November 25, 2016, revised March 24, 2017, revised October 23, 2017

Background: On September 16, 2016, Sabine and Waters was notified by the SC SHPO that the proposed Twin Lakes project area was in "proximity to numerous known archaeological sites, including a Civil War battlefield site" and that should "state permits or federal permits, licenses, funds, loans, grants, or assistance [be required] for development, we would recommend to the federal or state agency or agencies that cultural resource survey investigations of the Area of Potential Effect."

The client, however, contends that "almost all" of the project area "was a borrow pit that was dug to depths of around 6' (several trees are left on mounds showing the original elevations)." In addition, there are wetlands which are apparently "man-made," perhaps as a result of the borrow activities. Rather than conduct a cultural resources survey, the client is interested in a brief reconnaissance, or cultural resources assessment, for the project area to determine if a more intensive survey is justified.

We note that Phase 1 of the Twin Lakes project was completed ca. 2014 without any archaeological investigation or review. The current project is identified as a terminal Phase 2.

Objective: To obtain initial research that will assist in better understanding the types of sites present on the tract; to evaluate land use activities and their potential effects on possible archaeological sites; and to identify the areas of the tract, if any exist, that have the highest probability of producing archaeological and/or historical sites.

Survey Description: The approximately 58-acre Twin Lakes Phase 2 development is situated on the east side of John's Island (Figure 1) in an area which is beginning to see heavy development. The parcel borders two post-1959 drainage ditches on the northwest and southwest sides. There is a clearly defined borrow pit shown on the 1971 topographic map, as well as a post-1959 lake (Figure 2).

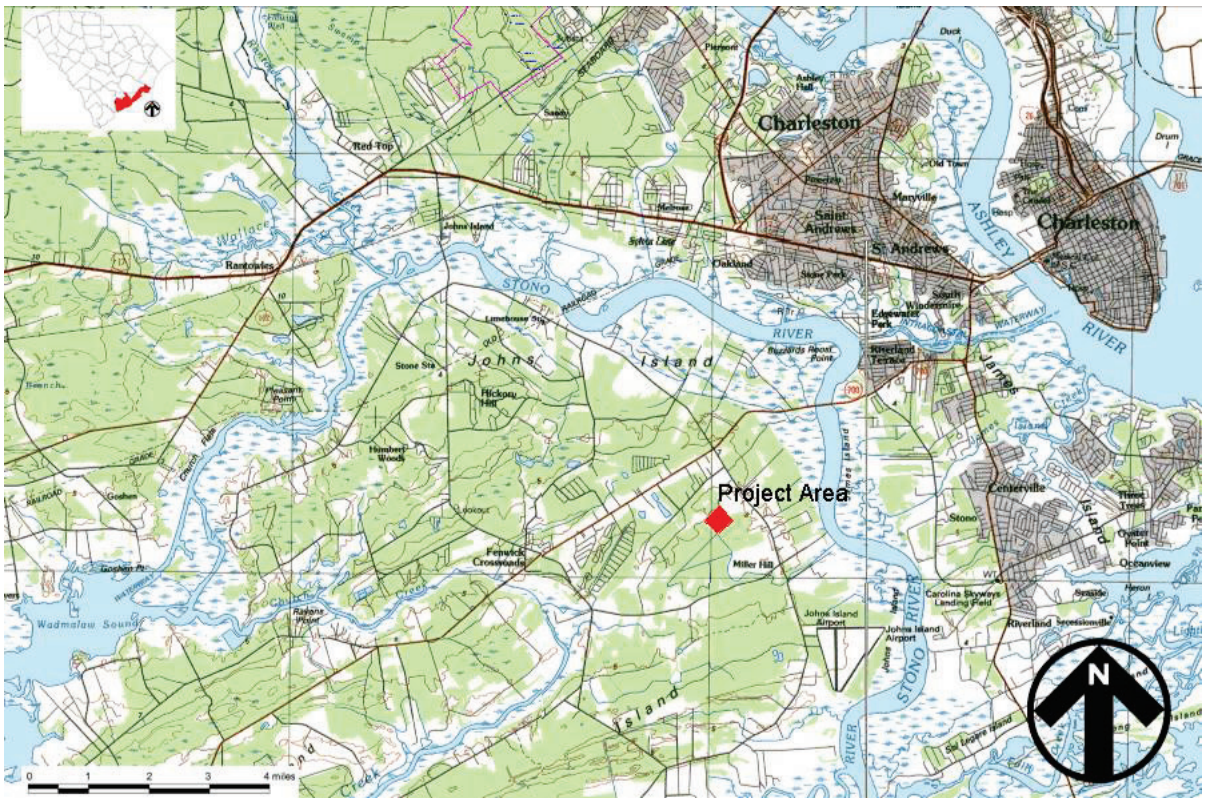


Figure 1. Portions of the James Island and Walterboro 1:100,000 USGS topographic maps showing the project vicinity.

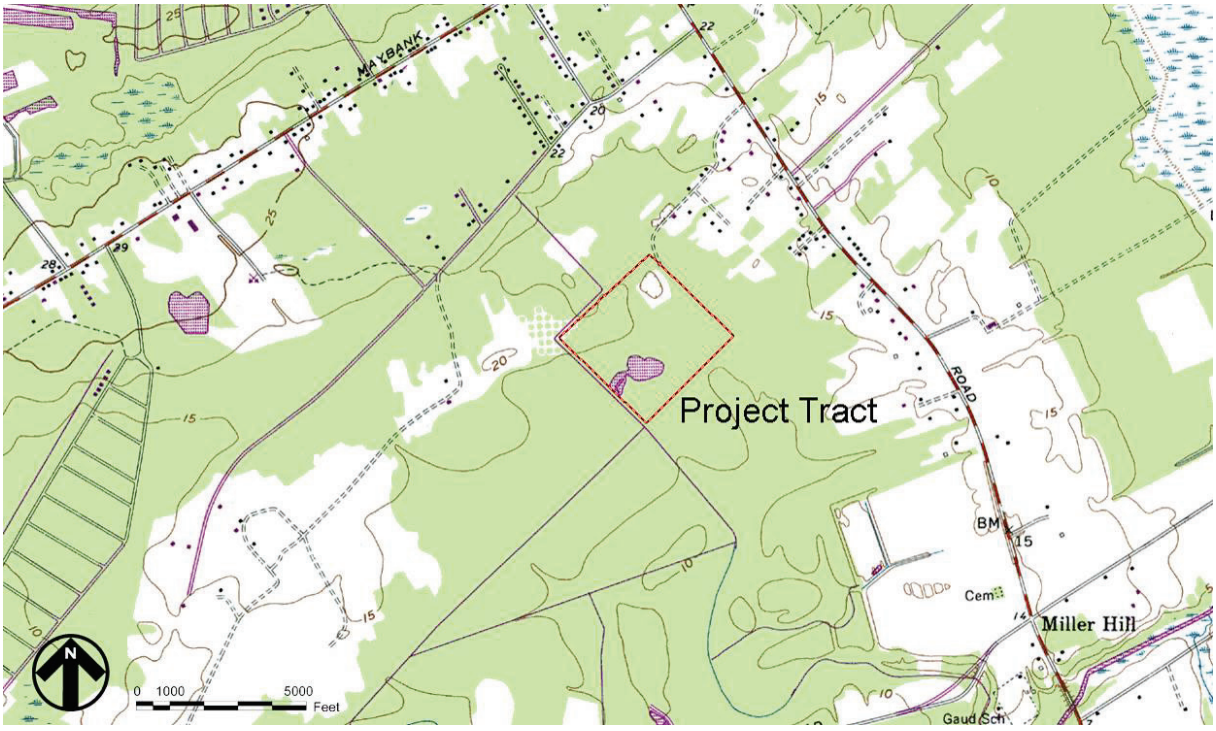
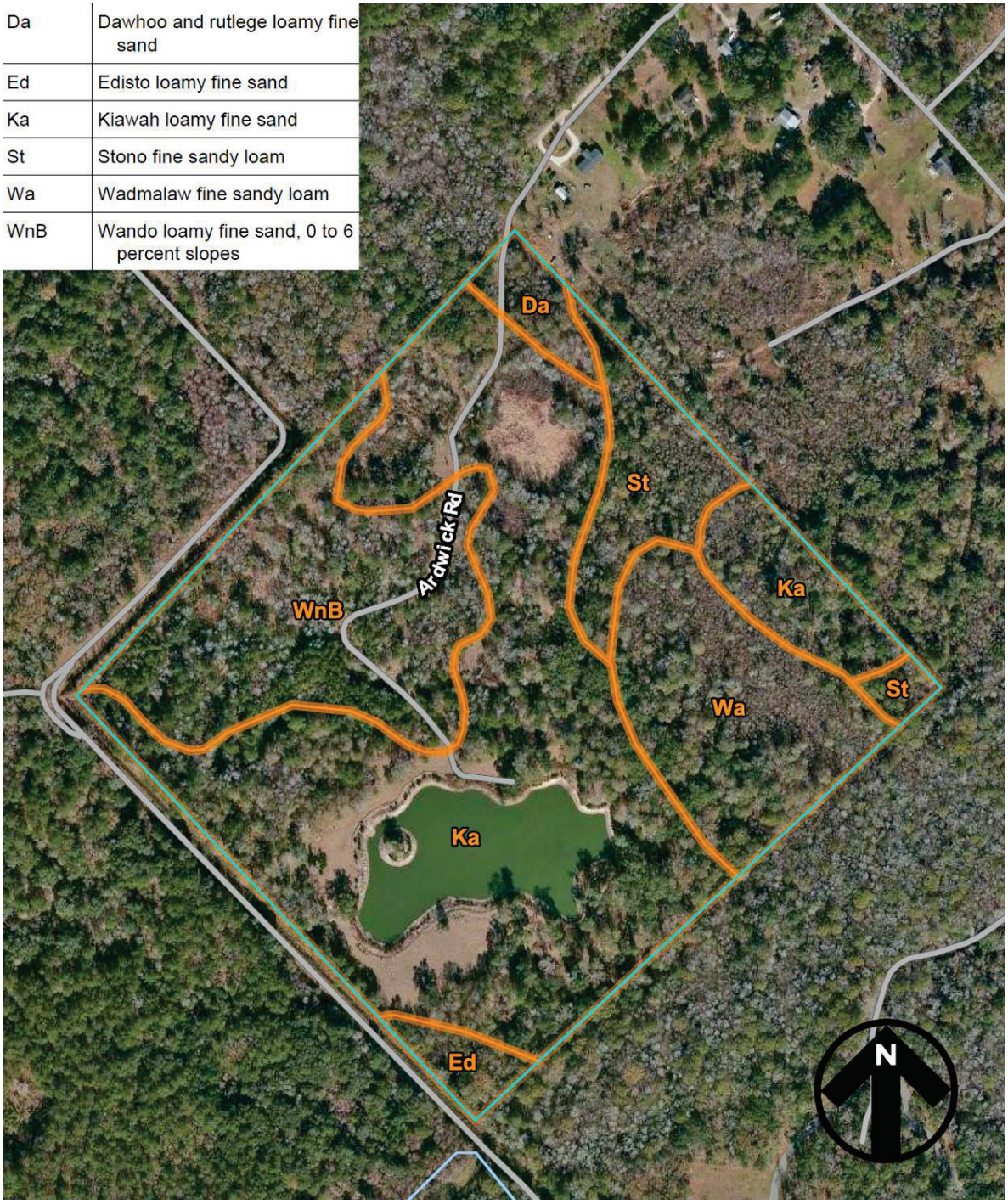


Figure 2. Portion of the Legareville 7.5′ topographic map showing the project area. Features in purple were added in 1971.



Da	Dawhoo and rutlege loamy fine sand
Ed	Edisto loamy fine sand
Ka	Kiawah loamy fine sand
St	Stono fine sandy loam
Wa	Wadmalaw fine sandy loam
WnB	Wando loamy fine sand, 0 to 6 percent slopes

Figure 3. Soils in the study area (see Miller 1971).

Figure 3 reveals that six soils are present in the study area. Two of these, the Dawhoo/Rutledge and Stono soils are classified as very poorly drained and have high water tables. Together they account for 5.6% of the tract. The Wadmalaw soils are poorly drained, with seasonal high water tables between 0 and 2 feet below the surface. They account for 7.8% of the tract (based on the USDA Web Soil Survey). Two soils, the Edisto and Kiawah soils are somewhat poorly drained, meaning they are wet for significant periods of time. Together they account for 33.6% of the study area. The only well drained soils

Figure 4. Vegetation on the study tract. The upper photo shows wetlands; the lower photo thin, second growth.

Figure 5. Vegetation on the study tract. The upper photo shows more mature second growth; the lower photo shows Phase 1 of the project.

are the Wando loamy fine sands, found exclusively along the northwestern edge of the parcel and they account for about 19.9% of the tract. These soils seem to correlate with the portion of the tract that is at an elevation of about 26-feet AMSL. The remainder of the study area is 16-20 feet AMSL, helping to account for the poor drainage. Vegetation is variable on the parcel, ranging from sparse to fairly thick. None of the trees appears to be older than perhaps 50 years and much of the vegetation is clearly second growth (Figures 4-5). Figure 6 reveals that the northeastern half of the parcel has been identified as wetlands and there is standing water throughout.

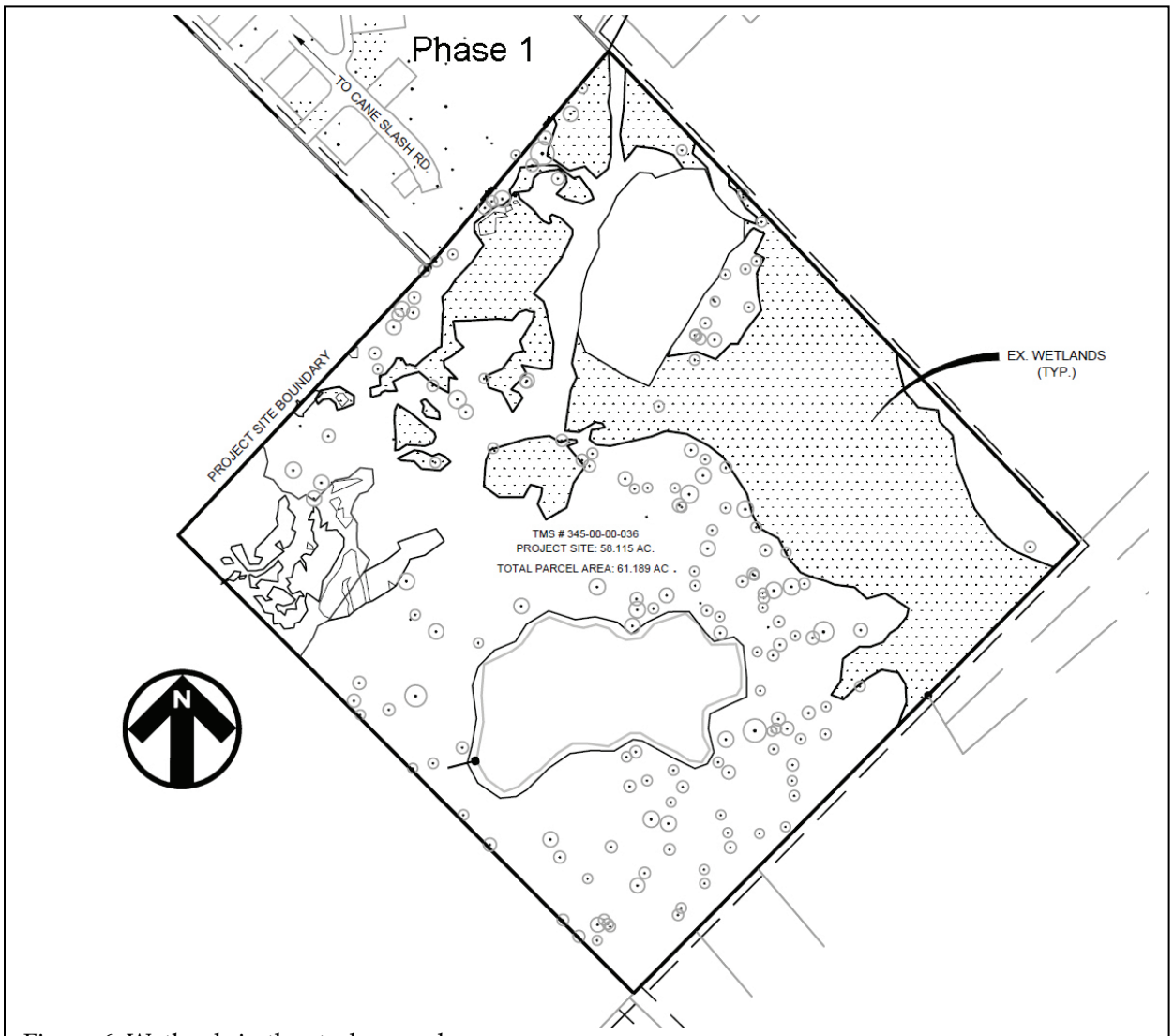


Figure 6. Wetlands in the study parcel.

Background Research: Archsite identified no archaeological, historical, or architectural sites within the study tract, ***which we consider to be the APE given the Phase 1 impacts to the area***. There are, however, several previous recorded sites from adjacent surveys (Figure 7). The closest is 38CH2047, a lithic and pottery scatter, with historic materials as well found bordering the proposed undertaking. This site was identified by the Brockington and Associates *Cultural Resources Survey of the Shade Tree Tract*, conducted in 2005. The site was found not eligible for inclusion on the National Register of Historic Places. Other sites are not further discussed since they are beyond the APE as defined.

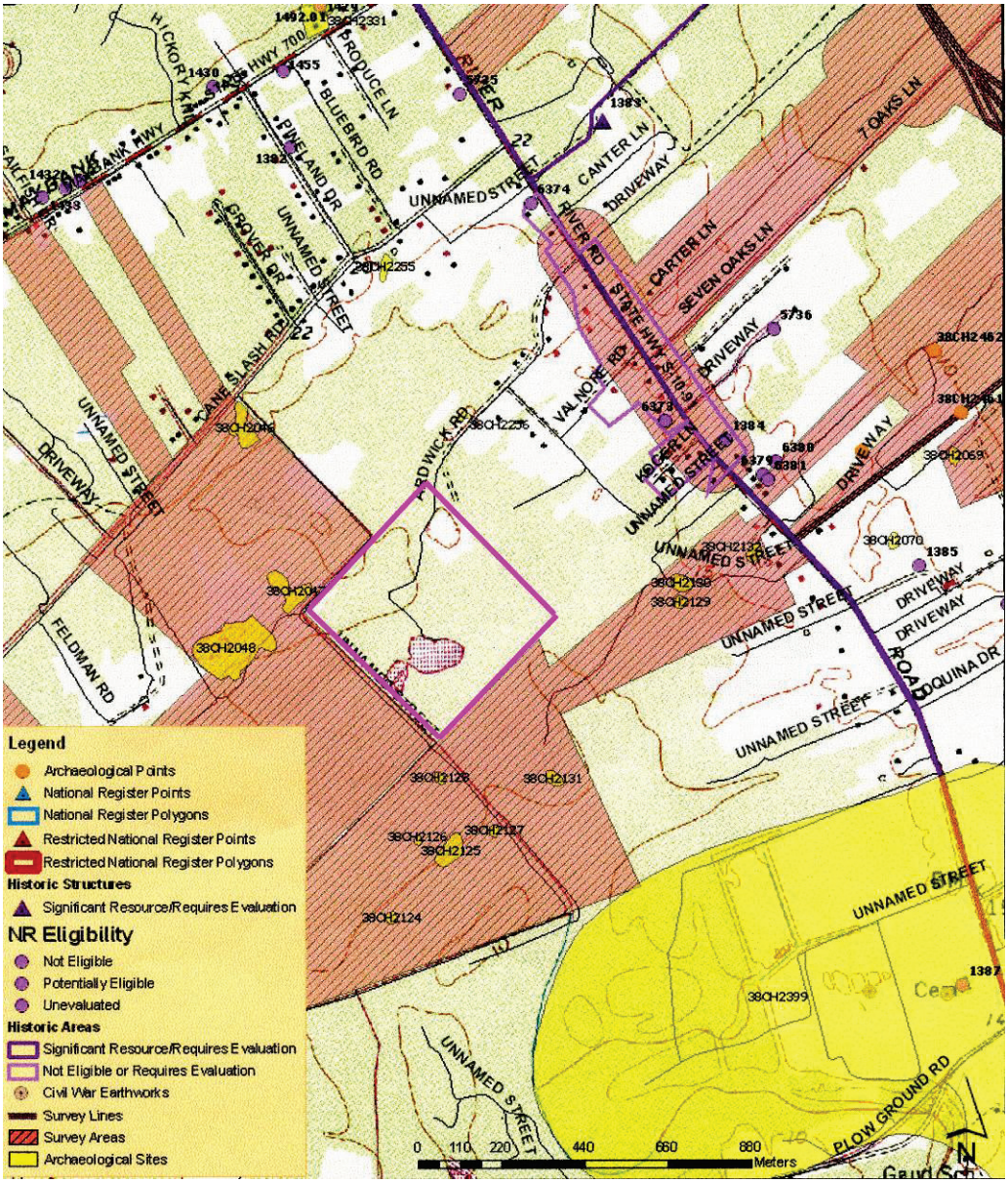


Figure 7. Archsite, with the study tract (APE) outlined in purple.

In addition, a variety of historic maps and aerials were examined to see if any structures or sites are located in or around the project area. These maps include:

1. The Kinsey Burden map of ca. 1819 (Figure 8)
2. Mills' *Atlas* of 1825 (Figure 9)
3. *Map of Charleston and its Defences*, 1863 (Figure 10).
4. Army Map Service, *Legareville*, 1919 (Figure 11)
5. Kollock's *Property Map of Charleston County*, 1932-1936 (Figure 12).
6. *Charleston County, South Carolina*, Sanitary and Drainage Commission, 1940 (Figure 13)
7. 1957 aerial photograph (Figure 14)

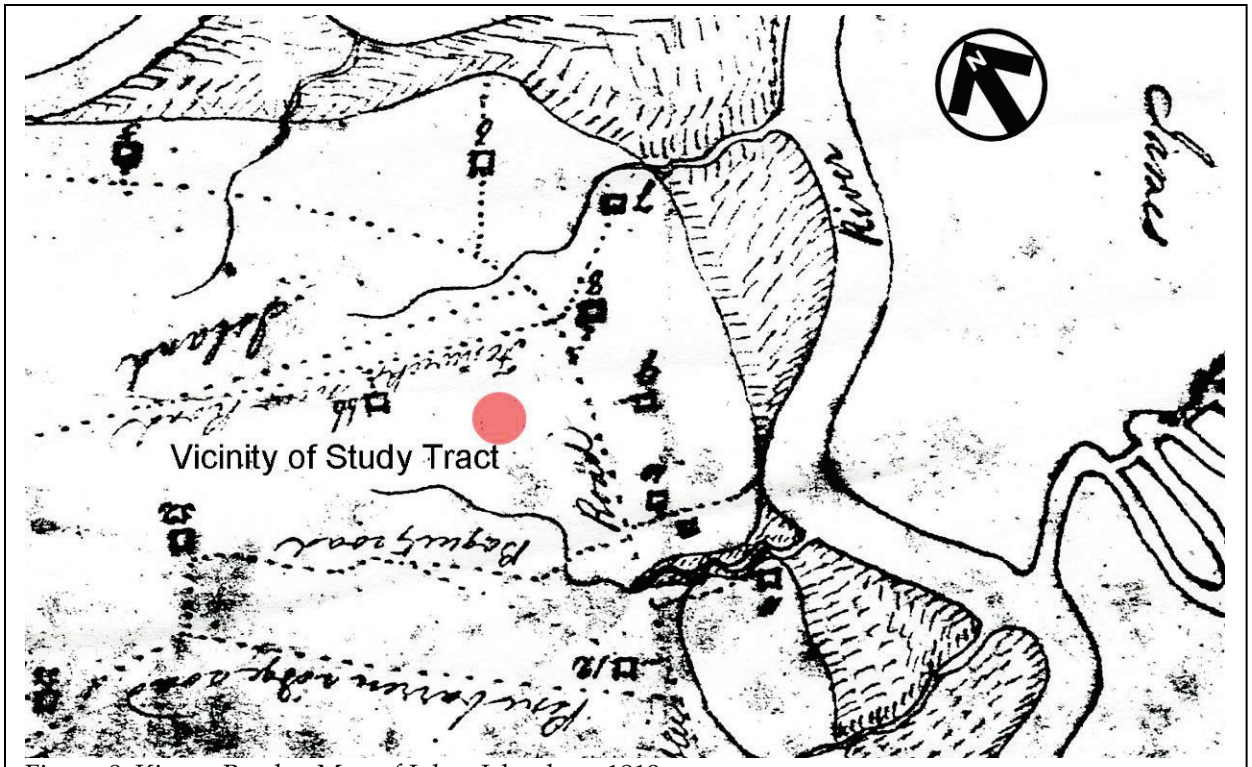


Figure 8. Kinsey Burden Map of Johns Island, ca. 1819.

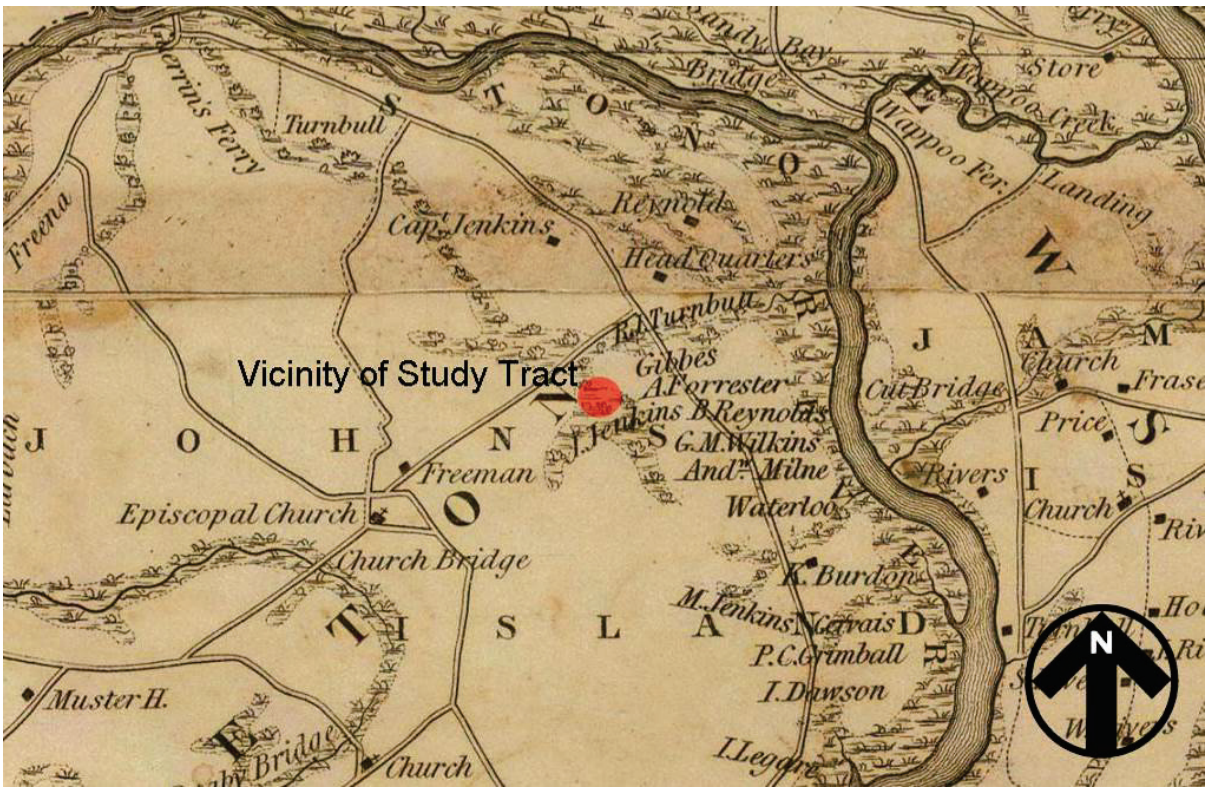


Figure 9. Mills *Atlas* of the Charleston District, 1825

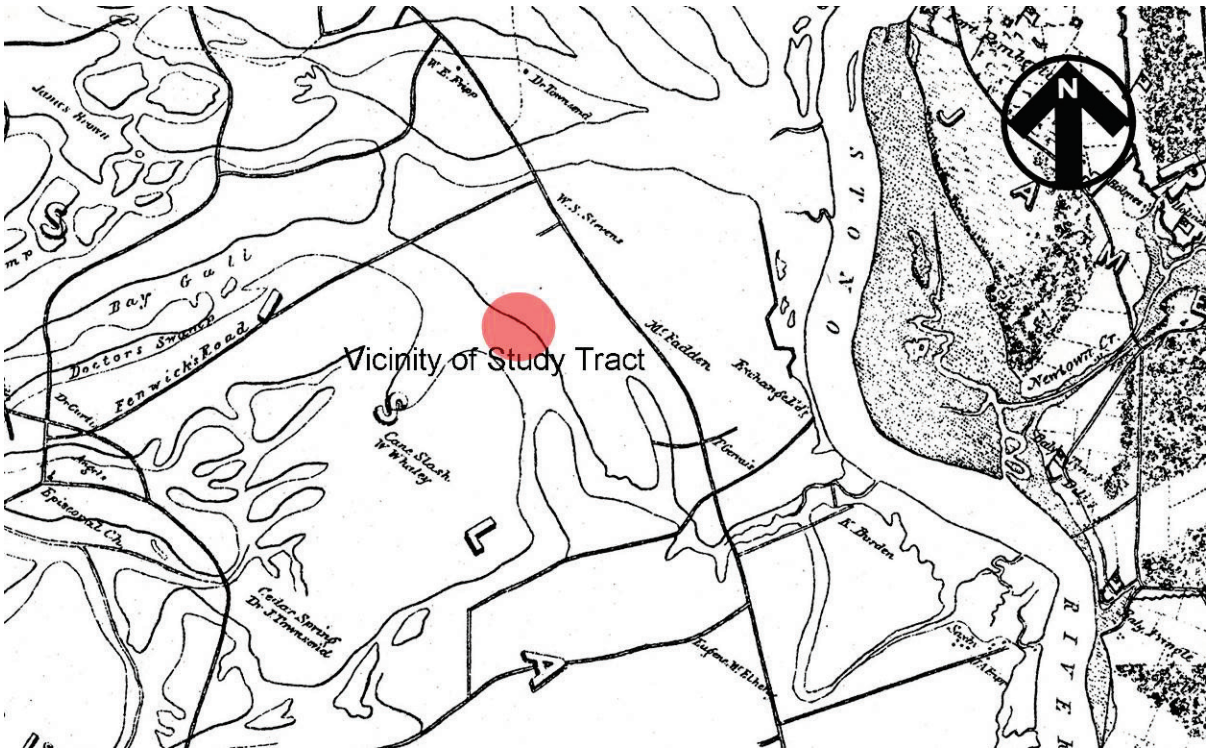


Figure10. Portion of *Charleston and Its Defences*, 1863.

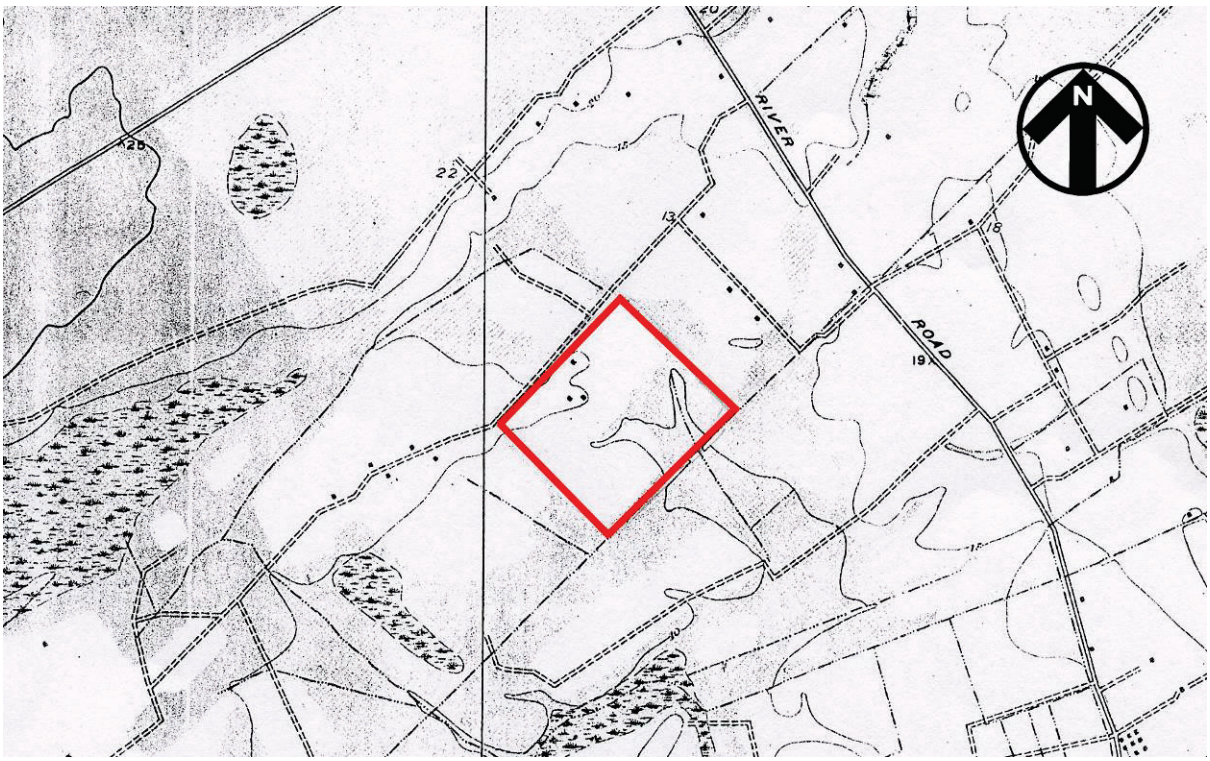


Figure 11. A portion of *Legareville*, 1919 with the study tract outlined in red.

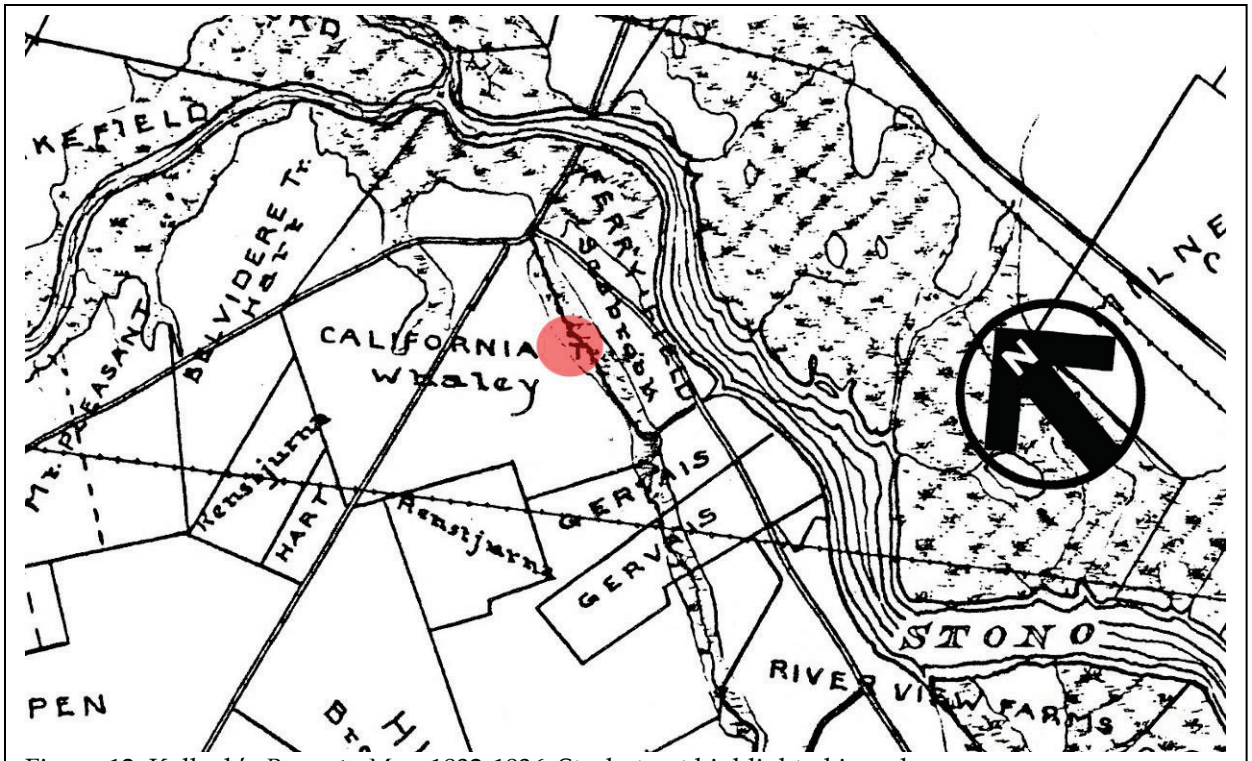


Figure 12. Kollock's *Property Map*, 1932-1936. Study tract highlighted in red.

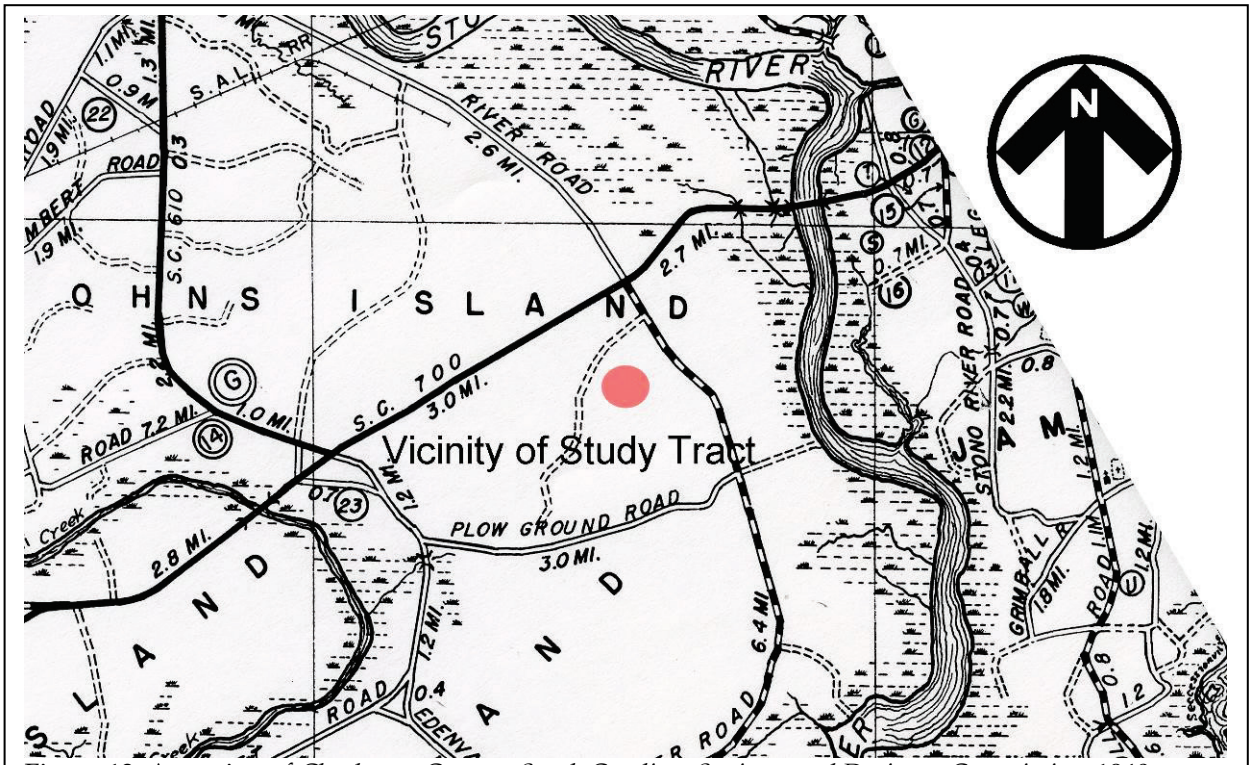


Figure 13. A portion of *Charleston County, South Carolina, Sanitary and Drainage Commission*, 1940

The Kinsey Burden map suggests that the study tract is not in the immediate vicinity of any major plantation settlement. Similarly, Mills *Atlas* places the parcel in a remote area, perhaps in what was viewed as low, wet swamp. A nearly identical location is suggested on the 1863 plan (Figure 10). It isn't until 1919 that we have a relatively detailed map of the area (Figure 11). It shows three structures in the study area, all along the northwest edge, in an area of well-drained Wando soils. It also reveals that the southwestern half of the parcel is cleared, probably under cultivation. Only the wetlands on the northeast half of the parcel are shown wooded. Figure 12 suggests that the parcel may be located on the property known as California by the mid-1930s, associated with the Whaley family. The final map, from 1940, provides no useful detail.

Figure 14. 1957 aerial image of the project area, shown outlined in red.

To these, we can add the earliest aerial we have identified for the area, dating from March 11, 1957 (Figure 14). The image shows a road running through the tract that may be associated with the structures identified from 1919. Virtually all of the southwestern half of the tract is either clear or appears to be in second growth scrub, suggesting that at some point the area was cleared and probably cultivated. This is consistent with the 1919 topographic map. The aerial also reveals that by this time there were no ponds or borrow pits excavated on the tract.

In an effort to better understand activities on the parcel, aerial images from 1961, 1968, 1971, and 1973 were examined (and are shown in Figure 15). Between 1957 and 1961 the northwest portion (the higher ground) of the tract was cleared and perhaps put back under cultivation. There may be a borrow pit at the southwestern edge, although the image quality is poor and this may be vegetation. By 1968, the area was again out of cultivation, although a variety of field or woods roads were still present and being actively used. The first borrow pit, excavated in a wetland area to create a pond, was present. By 1971, there had been extensive borrow activities, creating eight distinct ponds on the property, with the largest (and two extensions) located in the southern corner. By 1973 a variety of ponds and wetland areas – apparently all artificially created – are clearly visible.

These images clearly show that the property was heavily impacted by borrow activities beginning about 1968 and continuing through at least 1973. Prior to the borrow activities, the property was cultivated on at least two occasions, between about 1919 and perhaps 1950 and again about 1961. Consequently, a variety of factors have affected whatever archaeological resources that might occur on the tract.

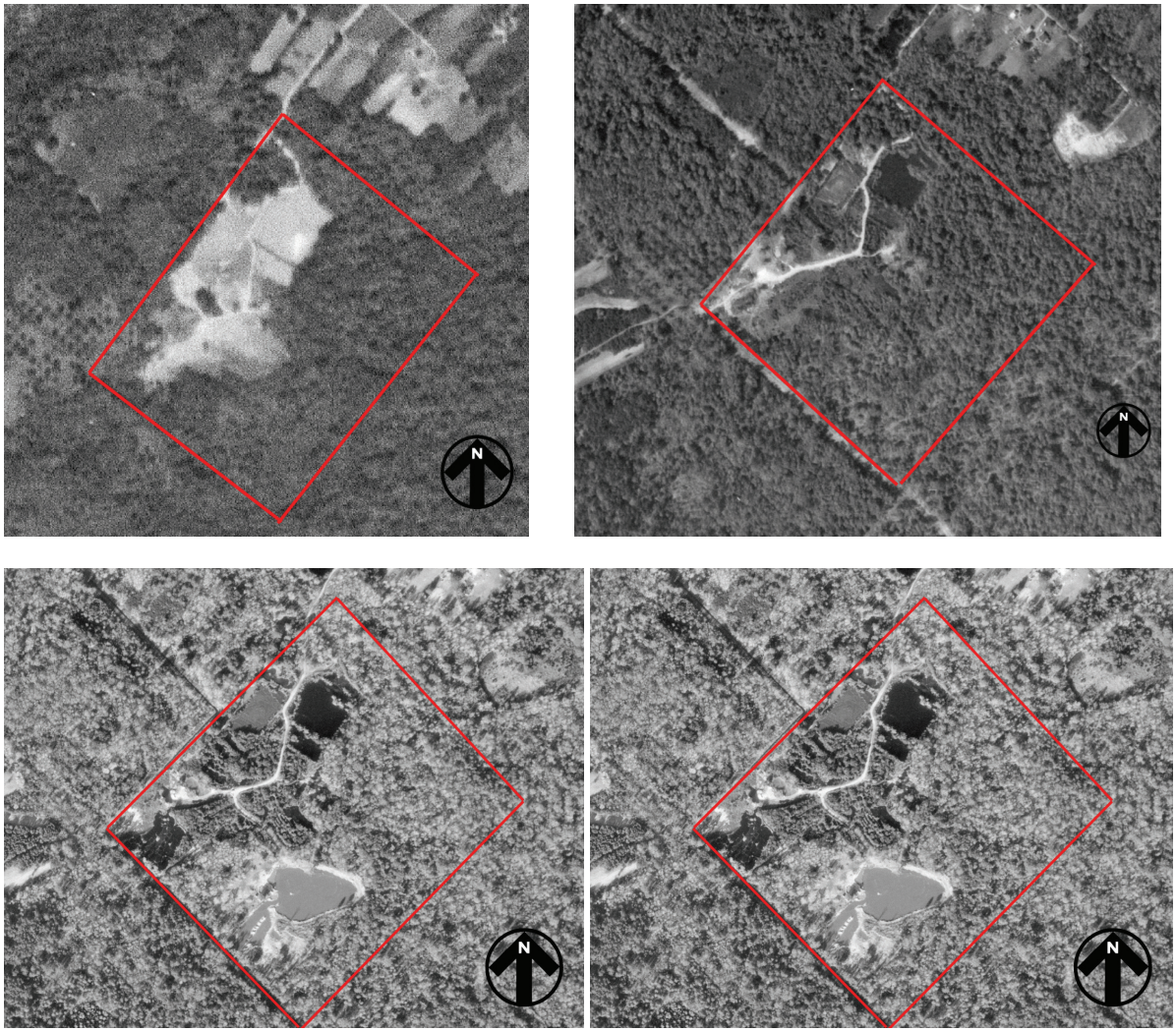


Figure 15. Aerial images. Upper left dates to October 1, 1961. Upper right dates to April 12, 1968. Lower left dates to December 26, 1971. Lower right dates to November 1, 1973. Boundaries are approximate.

Field Investigations: In order to better examine the area, the site was visited on November 25. Entering the tract from Blue Bayou Blvd., there is a woods road entering Phase 2. This is the only convenient access point, since elsewhere there is a large ditch and dike system running along the northwest and southwest edges. The ditch is about 10 feet in depth and 15 feet in width, with the spoil piled on the interior side. It is clearly man-made, first showing up in the 1968 aerial image.

The only area investigated was the northwest portion where the Wando soils are located. The reason for this is that these soils are most likely to exhibit cultural remains.

The topography in this area is undulating, with numerous push piles present. The topography clearly evidences some form of wide-spread borrow activity. There are also a number of trees growing on pedestals of soil. Although we did not observe any that were 6-feet in height, there are numerous examples suggesting the removal of 1-2 feet of soil throughout the area. This is documented in Figure 16.

Figure 16. Disturbances. The upper photo shows a pedestalled tree. The lower photo shows a ridge of remnant soil.

Figure 17. Area of extensive borrow removal. This is in an area of the project which we did not examine and the photo is provided by the client.

Five random profile examinations reveal an abnormal soil profile, suggesting truncated soils (i.e., subsoil without A horizon; the presence of bark or organic materials at depths of up to a foot; and inverted soil profiles suggesting soil movement). Being placed judgmentally, these locations were not recorded, although we believe that the entire area of Wando soils was examined by the pedestrian survey.

Summary: This research suggests that even under good conditions, the area has a low probability of encountering archaeological sites. This is clearly shown by Figure 6. This can at least partially be explained by examining the historic maps. Major settlements were situated on the road system and, more importantly, on dry, elevated soils. The project tract is situated in an area that several maps portray as a swampy gall or slough.

Of course, low density prehistoric site may be present and would not be identified by available mapping.

However, our examination of aerial photographs reveals that the project area has not only been cultivated (which may affect, but does not necessarily destroy archaeological resources), but also by extensive borrow activities which created a number of depressions or ponds. Some of these are still present today and, in fact, some were excavated not on high ground, but in the swamp. These may reflect an effort to create ponds for wildlife, such as ducks. There are, however, others that were excavated on high ground and which resulted in clearly defined ponds. Others appear as only surface stripping.

While we can't determine from these aerial photographs precisely why these activities were taking place, we can determine extensive areas of surface disturbance. These disturbances were verified on the ground. Including in shovel tests. Pedestalled trees, linear troughs and ridges are present. The vegetation is entirely recent second growth, further documenting relatively recent disturbances on the property.

Recommendations: We believe that this approximately 58-acre parcel has a very low probability for producing archaeological sites. The eastern and southern portions have low, poorly drained soils. The area of well-drained Wando soils appears to have been extensively damaged by borrow activities taking place in the late-1960s and throughout the 1970s.

Sources:

Miller, E.N.
1971 *Soil Survey of Charleston County, South Carolina.* U.S.D.A., Washington. D.C.